

## **REMARKS**

The Office Action dated January 14, 2010, has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto.

Claims 1 and 4-10 are rejected. By this Amendment, the Specification and Claims 1, 6 and 10 are amended, and Claims 4 and 5 are cancelled. Claims 2, 3, and 11-15 are withdrawn from further consideration in this application. Thus, Claims 1-3 and 6-15 are pending in this application. Support for the amendments may be found in the specification as originally filed, for example at paragraph [0023], page 9. Applicants submit that no new matter is added. Applicants respectfully request reconsideration and withdrawal of the rejections.

### **Information Disclosure Statement**

The Office Action asserts that the Information Disclosure Statement (IDS) filed October 20, 2006 fails to comply with 37 CFR 1.98(a)(2) for not supplying a legible copy of each cited foreign reference. Applicants note that the references were cited in the International Search Report. Because it appears the International Authority has not supplied copies of the references, Applicants have submitted copies of the references and the IDS filed on October 20, 2006, with the Submission of Documents filed on March 24, 2010. Applicants respectfully request reconsideration of the references.

### **Objections to the Specification**

The Specification is objected to for informalities. The Specification is amended in a manner believed to be responsive to the objection. Applicants respectfully request withdrawal of the objections to the Specification.

### **Claim Rejections – 35 U.S.C. §112**

Claim 10 is rejected under 35 U.S.C. §112, second paragraph, as failing to comply with the enablement requirement. Applicants have amended Claim 10 in a manner believed to be responsive to the rejection.

Claims 5 and 6 are under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Office Action asserts that there is no antecedent basis for the phrase “metal-atom containing molecules.” Applicants have incorporated and amended the subject matter of Claim 5 into Claim 1 in a manner believed to be responsive to the rejection.

Applicants respectfully request withdrawal of the §112 rejection of Claims 6 and 10.

### **Claim Rejections – 35 U.S.C. §101**

Claim 10 is rejected under 35 U.S.C. §101 because the claimed invention is not supported by either a credible asserted utility or a well established utility. Applicants have amended Claim 10 in a manner believed to be responsive to the rejection. Applicants respectfully request withdrawal of the rejection.

### **Claim Rejections – 35 U.S.C. §102/§103**

Claims 1 and 4-8 are rejected under 35 U.S.C. §102(a) as being anticipated by Kher et al. (U.S. Patent Publication No. 2003/0012875 A1, hereinafter “Kher”) and Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kher in view of American Heritage Science Dictionary. Applicants respectfully traverse the rejections.

Claim 1 recites a method for preparing an oxide thin film on a substrate, which comprises the steps of admixing a raw gas obtained through the vaporization of a raw material comprising metal atoms for the oxide thin film, a carrier gas and an oxidation gas in a gas-mixing unit, passing the gas mixture through a gas activating means which is arranged between the gas-mixing unit and a shower plate, ***maintaining the gas activating means at a temperature that induces vapor phase decomposition of the gas mixture, decomposing the gas mixture into metal atom-containing molecules in the gas activating means*** and supplying the gas mixture on a heated substrate placed in a reaction chamber as a chemical vapor phase growth apparatus through a shower plate to thus make the gas mixture react with one another, wherein a rate of oxidation gas flow rate is not less than 60% on the basis of the gas mixture.

Applicants respectfully submit that Kher does not disclose all of the features recited in Claim 1. First, Kher does not teach the step of maintaining a gas activating means at a temperature that induces vapor phase of the gas mixture. Rather, Kher discloses, "...the present invention mixes the vaporized first and second liquid precursors with an oxidizing gas such as oxygen, N<sub>2</sub>O, O<sub>3</sub>, or combinations thereof, at a temperature above the vaporization temperature of the precursors and below a temperature that degrades the components." See paragraph [0030]. Kher further discloses controlling the temperature of the substrate. See paragraph [0031]. Neither of these disclosures discusses maintaining a temperature ***of a gas activating means***. Kher does not otherwise disclose temperature control, and therefore, Applicants respectfully submit that Kher does not teach the step of maintaining a ***gas activating means at a temperature*** that induces vapor phase of the gas mixture.

Furthermore, Applicants respectfully submit that Kher does not disclose a step of decomposing the gas mixture into metal atom-containing molecules in the gas activating means. Kher is completely silent with respect to a step of decomposing a gas mixture into metal atom-containing molecules in a gas activating means. Rather, Kher only discloses vaporizing and depositing a film on a substrate. Kher states, “[t]he method comprises delivering one or more liquid precursors to a vaporizer, vaporizing the one or more liquid precursors and delivering the vaporized precursors to a deposition chamber to deposit a film on a substrate.” See paragraph [0024]. Kher further specifies that, “[a] preferred process according to the present invention deposits a BST film on a substrate mounted on a heated substrate holder using a gas distribution plate.” See paragraph [0031]. Thus, Kher only teaches the steps of **vaporizing and depositing**. Applicants respectfully submit that Kher does not teach or suggest the step of **decomposing a gas mixture into metal atom-containing molecules in a gas activating means**.

To qualify as prior art under 35 U.S.C. §102, each and every feature recited in a rejected claim must be disclosed by the applied art. For at least the reasons provided above, Applicants submit that Kher does not disclose or suggest each and every feature recited by pending Claim 1. Accordingly, Kher does not anticipate, nor render obvious, the subject matter recited by Claim 1. Therefore, Applicants respectfully submit independent Claim 1 should be deemed allowable over Kher.

The American Heritage Science Dictionary is cited merely to support the contention that ceramic substrates include the materials recited by Claim 9. Thus, Applicants respectfully submit that the American Heritage Science Dictionary does not cure the above mentioned deficiencies of Kher.

Claims 6-9 depend from Claim 1. It is respectfully submitted that these dependent claims be deemed allowable for the same reasons Claim 1 is allowable, as well as for the additional subject matter recited therein.

For at least the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1 and 6-8 under 35 U.S.C. §102(a) over Kher and Claim 9 under 35 U.S.C. §103(a) over Kher in view of American Heritage Science Dictionary.

## Conclusion

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account Number 01-2300, referencing Docket Number 026390-00034.

Respectfully submitted,



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Enclosure: Substitute Specification (28 pages)